

### ABSTRACT OF THE DISCLOSURE

A power semiconductor device includes a first semiconductor layer of non-doped  $\text{Al}_X\text{Ga}_{1-X}\text{N}$  ( $0 \leq X \leq 1$ ), and a second semiconductor layer of non-doped or n-type  $\text{Al}_Y\text{Ga}_{1-Y}\text{N}$  ( $0 \leq Y \leq 1, X < Y$ ) disposed on the first semiconductor layer. Source and drain electrodes are disposed separately from each other, and electrically connected to the second semiconductor layer. A gate electrode is disposed on the second semiconductor layer between the source and drain electrodes. An insulating film covers the second semiconductor layer between the gate and drain electrodes. A first field plate electrode is disposed on the insulating film and electrically connected to the gate electrode. A second field plate electrode is disposed on the insulating film and electrically connected to the source electrode.